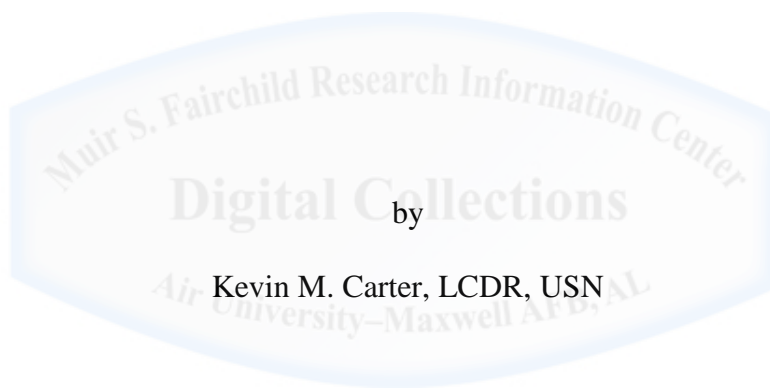


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Initiative Saving Initiative at Leyte Gulf:
US Command and Control at the Largest Naval Battle in History



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The victory at the Battle of Leyte Gulf was tactically and strategically decisive. Japanese losses: 33 warships.¹ Never again did the Japanese Navy seriously contest an American amphibious landing. American losses: 6 warships. The United States Navy commissioned more ships that week than were lost to combat.² As the largest naval battle in history, it was the culmination and proving ground for naval command and control doctrine. Yet because of the fateful and nearly catastrophic decisions made by American leaders, critics have since argued the merits of a centralized system for controlling forces at sea. Evidence refutes these critics. Tracing the intertwined early-20th century history between doctrine and control methods, and then examining the individual actions by those commanders at the battle yield one overarching conclusion: the naval doctrine, known as initiative of the subordinate, was the critical element of command and control that secured a decisive American victory at the Battle of Leyte Gulf.

The general argument regarding doctrine at the Battle of Leyte Gulf is that Admiral William Halsey erred by chasing after Vice Admiral Osawa Jisaburo's trap, thereby exposing the amphibious landing force. It was on October 24th, 1944 that Halsey steamed north on his own initiative to engage Osawa's Japanese carrier force, allowing another surface force led by Vice Admiral Kurita Takeo to approach the American transports at anchor in the gulf completely undetected. Author Michael Palmer wrote that "Halsey's actions demonstrate the dangers inherent in an initiative-based system."³ Yet, to debate Halsey's wrong choice and the failure of the command and control system misses the point. Instead of focusing on the actions of a single man, one must examine the timely choices made by lower-level commanders to draw any conclusion about naval doctrine during World War II. Those choices reflected the early 20th century thought given to naval doctrine.

A recent graduate of the Naval War College, Lieutenant Commander Dudley Knox wrote of the necessity of quick action during naval engagements, with a special emphasis on sea battle. Published in *Proceedings* in 1915, he argued that the time factor of naval operations requires a subordinate to, on occasion, decide and act before his superior is even made aware of the situation. To ensure harmonious action, commanders must meet with their subordinates prior to battle to summarize the expected actions, intentions, and desires.⁴ Today, doctrine calls this unity of effort. For his argument, Knox referenced Lord Nelson's handling of Trafalgar as the epitome of successful command because he gave his subordinates the task of independently engaging the enemy. Knox argued this while warning that the action required for overcoming exigencies "immediately renders centralization fatally weak."⁵ His argument was timely. Unlike previous generations who sailed with wind or steam, it was oil that powered the new Navy. Ships could travel faster and cover greater distances, meaning they could also travel farther apart from one another in a fleet. In addition, the biggest technological advance was the pioneering use of the radio spectrum. By 1915, the argument Knox laid out was during the ever-increasing use of radio communications between shore and ships.

In 1903, the US Navy tested its new radio sets in summer exercises of its North Atlantic Fleet. Primarily a search exercise, the extended use of "wireless" proved that communication between ships at great distances was essential in war.⁶ Within 10 years radio became an acceptable method of tactical signaling between ships.⁷ For the first time in US Navy history, a commander had the authorization and rudimentary means to control another ship from beyond the visual range. Thus began the dilemma facing leadership: how much control should be centralized? It was against this backdrop that Knox argued that "it cannot be reiterated too often

that on the water the element of time will invariably prevent any effective coordination which depends upon signals, radio messages or written instructions.”⁸

The doctrinal principle of initiative of the subordinate continued to linger throughout the Navy into the 1920s. Again, leaders considered naval warfare to be time-critical enough that the underlying doctrine of initiative was necessary to allow independent action. The key to success was sharing a common intention and goal between leaders and those under their command. Rear Admiral W.V. Pratt described this in 1922 when he wrote that the commander’s purpose must be understood by subordinates such that the “fewest orders, simply expressed, may flow between them.”⁹ These arguments, pitting time-sensitive action against centralized control, began appearing in official Navy documents as opposed to simply theses or opinion pieces.

Furthermore, another aspect to the debate took shape with the creation of radio direction finders. Effectively used throughout World War I by the British and French, constant tracing of German ships had been made possible through tracking their radio messages.¹⁰ By linking the desire for independent action with the necessity to limit detection, Navy headquarters formulated, during the interwar period, doctrine for the theoretical employment of command and control.

The Navy published the culmination of this doctrine in its *War Instructions United States Navy* in 1924 and again in 1934. For the issue of command, both editions contained wording that implied a subordinate would, in emergencies, have to act on his own decision rather than a superior’s order.¹¹ Theoretically, this document served as the guideline for all naval officers in a time of war. Yet those that employed the theory faced challenges not from the abstract, but from reality. Technology again played an influential role. Newly built radio installations covering both the Atlantic and the Pacific meant that commanders were able to direct and control from afar. Thus, the ease to control began to match the inherent desire to control. In 1925, the

inventor C. Francis Jenkins went so far as to make a proposal in *Proceedings* to deploy ships with radio vision (predecessor to television). With this technology, a commander could watch the battle from his office.¹² Although this proposal was well ahead of its time, the implications were apparent. Addressing the arguments regarding radio usage, the 1924 edition of *War Instructions* was quite clear that the radios were to be used sparingly, or “even to the point of absolute radio silence.”¹³ The fear of being discovered limited the use of radio; continuous control risked detection at long ranges. Thus, practical application bolstered the theoretical argument for maintaining decentralized command and control. Even so, the difference between theory and actual practice was evident entering the 1940s. In an attempt to remedy the situation, future Chief of Naval Operations Admiral Ernest King issued a January, 1941 fleet-wide warning. In this memorandum, he stated that commanders had grown accustomed to giving such detailed orders to subordinates as to “virtually become the antithesis of that essential element of command- ‘the initiative of the subordinate.’”¹⁴ This would prove pivotal at Leyte Gulf between admirals Chester Nimitz, William Halsey, and Thomas Kinkaid.

According to biographer E.B. Potter, most of the naval leaders of World War II attended the Naval Academy.¹⁵ After their education and graduation from Annapolis, the majority went on to serve in surface ships where captains emphasized loyalty, initiative, and decisiveness. Throughout the 1920s and 1930s, these future commanders began to adopt the principles of decentralized control. Yet, not everyone shared the same view. One such debate occurred between Admiral Ray Spruance and Nimitz in 1942. Spruance wished to use long-range radio transmissions to offer “advice” to subordinates. In response, Nimitz explained to Spruance that “looking over their shoulders will only inhibit them. As long as the local commanders have the responsibility, they must retain the initiative to do what they think best.”¹⁶ Halsey also believed

in a hands-off approach to leadership; perhaps this was due to his reading of Dudley Knox at the Naval War College in 1933.¹⁷ Commander Arleigh Burke later remembered Halsey directing him in 1943 to engage enemy ships by simply stating "Proceed. You know what to do."¹⁸ In these cases, restraint exhibited by the superior to intervene dominated thinking. But this restraint also required that the action of the subordinate not be in support of the superior's specific command, but the superior's overall objective.

Leaning on its experience in two years of war, Section III, Initiative, of the 1944 *War Instructions* pressed that unforeseen situations necessitated action by the subordinate: "Unity of effort results when there exists, within and between the echelons, such mutual understanding that each subordinate commander, in the absence of specific instructions, acts instinctively as his immediate superior would have him act."¹⁹ Not only was the action required, but these instructions directed that the subordinate *disobey* a superior's order if that order did not further the superior's plan.²⁰ Unlike previous editions of *War Instructions*, this change signified not just the authority of the subordinate but the trust given to him. This is all the more significant because the commander retained overall responsibility for any action, including those taken by a subordinate. Therefore in theory, a commander could be responsible for a subordinate who disobeyed the former's order, as long as that action garnered a justifiable intention. These ideas were reality at Leyte Gulf.

To understand the role of command at Leyte, one must understand the structure, geographic location, and chain of command established for the operation. In 1942, Washington planners divided the Pacific into two geographic areas of responsibility: the Southwest Pacific Area (SWPA) and the Pacific Ocean Areas (POA). The Philippines were at the edges of both. Admiral King, in his role as Commander in Chief US Fleet (COMINCH), utilized the existing

two-fleet arrangement for the naval component of the assault on Leyte Gulf in the Philippines: Admiral Halsey commanded the carrier-centric Third Fleet while Admiral Kinkaid commanded Seventh Fleet, the amphibious assault and support element. These two fleets impressively combined for nine fleet carriers, 37 escort and light carriers, 12 battleships, 11 heavy cruisers, 17 light cruisers, 212 destroyers and destroyer escorts, 10 frigates, 29 submarines, 13 minesweepers and minelayers, 42 supporting oilers, and 420 amphibious assault ships.²¹ Because Seventh Fleet operated for the SWPA theater commander and thus the invasion, Kinkaid reported to General Douglas MacArthur. Contrasting to this, Third Fleet operated with responsibility to the POA and thus Halsey reported to Nimitz (in the latter's role as CINCPOA). The lower echelon organizations of naval force comprised of Task Forces (TF), Task Groups (TG), and Task Units (TU). In modern terms, an individual ship captain through a task group commander represented the tactical level while the enormous size and maneuver space of a task force represented the operational level. Washington planners attempted to establish command and control for the enormous operation but failed in a critical regard.

Demonstrating the first failure of command and control at Leyte Gulf was the command structure itself. As stated, Admiral Kinkaid, as commander of Seventh Fleet, reported to General MacArthur. His peer and commander of Third Fleet, Admiral Halsey, reported directly to Nimitz. The control system, including radio communication protocols and frequencies, mimicked this command structure. Therefore, Kinkaid and Halsey did not have direct communications with one another, despite their areas of responsibility being congruent.²² The technology existed to enable this but the strict chain of command alignment under MacArthur and Nimitz meant that the two were not authorized to share direct messages. From the operational perspective, this required that the two operate with subordinate initiative since any

liaison between them would have to first go back to their collective superiors. That correspondence alone would take minutes and hours rather than seconds. Considering that MacArthur was at Leyte and Nimitz in Hawaii, it is obvious that the fractured command structure did not support mutual understanding and awareness by subordinates. Add to that a battle plan over an inch thick and containing over 25 pages of movement instructions, and from the onset the plan failed to support an initiative-based system.²³ Ironically, it would take Halsey's initiative to show the flaws of this setup.

The second, and most recognized failure of command and control at Leyte Gulf was Halsey's decision to abandon San Bernardino Strait. A brief history is necessary here to understand the context. The overall Japanese plan called for three groups to simultaneously approach Leyte Gulf. The Northern Force's role was to be a decoy, pulling away the strength of the US Third Fleet. The Central and Southern forces were to make a pincer movement on the American transports in the gulf. On October 24th, the battleship and cruiser-dominated Central Force under Kurita sailed east within the Philippine islands toward Leyte. Knowing the enemy position and disposition thanks to reconnaissance aircraft reporting, Third Fleet aircraft pummeled the Central Force as it went through the Sibuyan Sea. This action forced the latter to reverse course and head back to the west. Meanwhile, scout aircraft from Third Fleet discovered Osawa's carrier-centric Northern Force. With intelligence reporting that the severely weakened Central Force was withdrawing to the west, Halsey decided to pursue Osawa's carrier force to the north.²⁴ Historians have long since argued that Halsey's aggressive initiative to destroy enemy carriers, coupled with his disobedience to protect the invasion force, meant near-disaster for Seventh Fleet ships. Indeed, Halsey made a poor choice in abandoning his position (or at least in failing to leave a task force of battleships behind to defend it). The problem with his decision

was not that he acted independently, but that he acted independently when those outside of his chain of command depended upon him.

As a subordinate to Nimitz, Halsey did not lack initiative in executing his commander's intent. In fact, Nimitz issued orders stating to Halsey that if possible, destruction of the enemy fleet was the priority.²⁵ Therefore his pursuit north, for what Halsey believed was the greatest challenge to his force, was by orders the primary task.²⁶ His failure was that he did not inform his peer, Kinkaid, of exactly what the former was doing with his forces regardless of any established chain of command. Meanwhile, relying on his own communications officers to decode all theater-wide message traffic, Kinkaid intercepted these messages and assumed that Halsey was currently forming a separate task force with six battleships (i.e., Task Force 34). When Halsey sent word that he was "proceeding north with three groups," Kinkaid believed that TF 34 remained at San Bernardino Strait.²⁷ Yet, Halsey did what he said: he moved north with his three carrier task groups (collectively known as TF 38). Despite being in separate chains of command, Halsey did operate near enough to Kinkaid to justify communicating specifically the then current makeup of Third Fleet (i.e., TF 38). When Halsey sent his message, Kinkaid began to internally question what Halsey was doing but did nothing to clarify the situation. Therefore, the errors between these men were in coordination and assumptions rather than initiative or command and control.

Countering the errors of their superiors, several individuals demonstrated the initiative necessary for salvaging a dire situation. These pertained to all three mediums of sea power: subsurface, surface, and air. Submarine skippers ignored orders, surface combatants acted without orders, and aviators parted with standard procedures.

The first positive example of initiative of the subordinate began with Nimitz' orders to the Pacific Fleet submarines leading up to the engagement at Leyte Gulf. For his initial air raids on Formosa, Admiral Halsey requested, to be under his control, a line of 50 submarines to form a picket station from Okinawa to the Chinese coast. Yet Nimitz declined the request and maintained that submarine skippers were to independently perform two objectives: first to seek out, report the position of, and destroy enemy warships and second, destroy enemy merchant shipping.²⁸ Command and execution continued to be decentralized. At first glance, these orders combined with initiative appeared to be the cause of missed opportunities at Leyte when submarines acted without central control. After spending several days performing a surveillance role with no results, a three-boat wolf pack led by Commander Tom Wogan departed its assigned lookout position at Bungo Strait in hopes of preying on merchant shipping.²⁹ Fatefully, two days later Vice Admiral Ozawa's carrier force consisting of four aircraft carriers, two battleships, three cruisers, and two destroyers transited the Bungo Strait undetected by the Americans.³⁰ Perhaps Halsey's request for direct control was the better option. Indeed three submarines could have done considerable damage and a contact report could have alerted Halsey and Nimitz. That point is irrelevant though, as Ozawa wanted to be discovered. Because his force was merely a decoy, any missed opportunity by American submarines was irrelevant to the Japanese plan or to the outcome of the battle. Contrasted to this is the significantly relevant initiative demonstrated by the skipper of *USS Dace*, Commander Bladen Claggett. Although his patrol ended on October 22nd, Claggett postponed his planned departure from the area simply on a single potential opportunity at meeting a Japanese fleet.³¹ His decision, combined with chance, paid off the following morning as *USS Dace* along with *USS Darter* encountered Kurita's Central Force. These submarines sunk two heavy cruisers and significantly damaged a third, influencing Kurita

to detach two Japanese destroyers from the Central Force then proceeding through the Palawan Passage.³² So whereas *USS Darter* did abandon its lookout position of the Balabac Strait in order to pursue Kurita's fleet, the contact reports by both submarines allowed Kinkaid and Halsey to use other assets to cover the assigned surveillance area. Thus, the two submarine skippers acted independently by departing their assigned area in order to take initiative against the enemy surface ships. These actions demonstrated success in following the naval doctrine found in *War Instructions*: act first and report second.

The second act of initiative at Leyte Gulf proved that the time-critical aspect of naval warfare applied not just to submarines but also to surface combatants. On October 25th, when Kurita's still-potent Central Force came within 20 nautical miles, undetected, of the northernmost units at Leyte Gulf, the now legendary story began to form.³³ Kurita's battleships and cruisers far outclassed the six small escort carriers (CVEs), three destroyers, and four destroyer escorts known on the radio as "Taffy 3," stationed off Samar Island. As Japanese shells began raining down on the American ships, there was little for the screening ships to do but lay smoke in hopes that the CVEs could escape. Lieutenant Commander Ernest Evans, commanding *USS Johnston*, had other ideas. He ordered his ship to ring up flank speed, make smoke, and turn *toward* the Japanese fleet.³⁴ Minutes later Lieutenant Commander Bob Copeland, commanding the destroyer escort *USS Samuel B. Roberts*, also decided to act on his own. Disregarding orders to form up with the other destroyer escorts, he sent his ship directly toward the approaching enemy.³⁵ Both ships scored hits on Japanese cruisers. Yet these were only the opening acts for the "tin cans" of Taffy 3. Without torpedoes and lacking armament to seriously damage their opponents, the small American ships made dummy runs without orders to harass the oncoming Japanese. Rear Admiral Felix Stump, commanding the adjacent task unit nicknamed "Taffy 2,"

later explained "no orders were received from anyone during the entire day, nor were they necessary."³⁶ The destroyers and destroyer escorts acted independently but brought a unity of effort to the cause. Also joining that unity of effort was naval aviation.

Not to be outdone by their subsurface and surface brethren, the naval aviators assigned to the carrier escorts proved that initiative cannot wait for orders. Even before the destroyers of Taffy 3's screen made their desperate advance toward the Japanese cruisers and battleships, Admiral Clifton Sprague ordered the immediate launch of all aircraft from the six CVEs under his command. What is remarkable about following this order is not that it was a strike against surface ships, but that the aircraft launched despite not being armed properly to attack surface ships. These armament configurations included depth charges to be used against submarines, fragmentation bombs to be used against land targets, and even some aircraft had no ammunition at all.³⁷ Indeed desperate times called for desperate action, but the willingness to fly against the anti-aircraft fire with little hope of returning the favor demonstrated the courage and initiative of the CVE aviators. By making attack runs without any weapons, the flyers diverted return fire from their fellow aviators with actual bombs and torpedoes. During this time most carriers initially launched only two or three aircraft, but *USS Kitkun Bay* succeeded in launching 11 fighters and six bombers led by Commander R.L. Fowler.³⁸ He personified the fighting spirit of those present by his perseverance to stay in harm's way. After expending his ordnance, he remained overhead the enemy in order to form up and then lead subsequent dive-bombing attacks against the battleships.³⁹ Due in part to the constant menace of the desperate aviators, Kurita withdrew his fleet to the north, away from Leyte Gulf.

Actions against the Japanese were not the only examples of initiative of the subordinate; the rescue of American sailors immediately following the battle depended upon it. Perhaps it

was a bit ironic in light of the decentralization debate, but radio communications provided the critical intelligence allowing subordinates to act with a greater understanding of the events around them. Furthermore, subordinates did not have to be lower-level commanders to show initiative thanks to the wide-spread readability of message traffic. Captain Charles Adair was one example of a member of the flag staff that made a key decision saving hundreds of lives. Assigned to Admiral Daniel Barbey's staff (TF 78, under Kinkaid), Adair monitored radio message traffic and discovered that American sailors were adrift in the water with no unit even attempting a rescue. By forming a team comprised of two patrol craft and five landing craft, he initiated the rescue effort.⁴⁰ This rescue, however, came close to meaninglessness without the insubordination of a junior officer. As officer of the deck to PC-623, the lead boat of the rescue, Lieutenant Allison Levy twice asked permission from his commander, Lieutenant Commander James Baxter, to head toward what Levy perceived to be signal flares. Twice Baxter denied him; Japanese shore batteries could engage the small boats if they sailed too close. Completely disobeying his commander, Levy ordered left full rudder and flank speed. He moved the ship away from the formation and toward the flares. Baxter angrily came to the bridge to relieve Levy, but the latter refused to be dismissed. Moments later, even Baxter relented as the boat neared survivors of *USS Gambier Bay* floating in the water. The initiative of Adair combined with the insubordination of Levy resulted in the saving of over 1,100 survivors.⁴¹

Given that the doctrine of initiative of the subordinate survived the largest naval battle in history, one would expect to hear echoes of this through modern doctrine. Yet only the US Navy embodies this at the institutional level. The US Air Force maintains its "centralized control, decentralized execution" for providing airpower.⁴² Only minor decisions are made away from the distant commander. The US Army practices "mission command" which emphasizes some

initiative of the subordinate to operate *within* the commander's intent.⁴³ Yet the growing list of doctrine publications (e.g., FM series) appear to be at odds with independent action since these publications address both the *what* to think of the problem and the *how* to address it. Contrary to this, the US Navy, with its single doctrine publication, fully empowers the subordinate: "Even in an era of nearly instantaneous communications... having the subordinate commander execute operations in accordance with a thorough understanding of the commander's intent is a key tenet of the naval forces' C2 philosophy."⁴⁴ One must note that the subordinate is not bound to be within the commander's intent, but must simply understand it in executing the mission. It is not difficult to speculate that if the US Navy took heavy losses at Leyte it would have been forced to change its doctrine. How then, was an unfortunate decision by Halsey countered by numerous successful acts of initiative by others?

The answer is two-fold: execution and unity of effort. Here, execution means the action taken by a subordinate regardless of his superior's order. This action can be fully in compliance with, completely insubordinate to, or without any reference to an order. Initiative therefore directly impacts execution because it shapes the actions taken by the subordinate. But a mobilizing force such as initiative needs direction to focus its effect. This direction is unity of effort, the compliment to execution. The former helps guide the latter. It is the direction along which execution creates change. With a subordinate executing to further his commander's mission, the doctrine of initiative of the subordinate works. This is most evident at the tactical level where tasks and purposes are specific; they are well-defined. If the outcome is tangible and the restrictions are few, a junior leader can freely act without needing additional guidance. This is why submarine and ship captains operated without concern for specific orders. In the case of *USS Darter* and *USS Dace*, the mission was simple: harass and track enemy ships. For the ship

captains of Taffy 3, the survival of the CVEs was priority. Therefore their actions did not require orders. By each captain acting toward the same goal, the collective effort confused and crippled the Japanese effort. The same was true for the aviators. Only on few occasions did multiple aircraft operate in pre-arranged flights.⁴⁵ Yet, the constant harassing prevented the Japanese from meeting their immediate objective: destruction of American carriers. In each of these cases initiative caused action that, with proper understanding of the mission at hand, developed a unity of effort amongst the participants. This unity of effort, executed at the tactical level, saved the Americans from disaster at Leyte.

What, then, of command and control doctrine at the operational level? The only intercession from Pacific Fleet headquarters during the battle occurred as Halsey proceeded to engage the Northern Force. Nimitz, despite being confused by Halsey's message traffic and unsure of the disposition of TF 34, repeatedly did nothing. He did not want to go against his own judgment to directly or indirectly influence the responsible tactical commander.⁴⁶ Finally, at the urging of his aid, he released the unassuming yet infamous "the world wonders" message.⁴⁷ The timing of this message was much too late for decisive action. Surely a more intrusive leadership approach earlier in the engagement could have prevented the events off Samar. To summarily come to this conclusion, though, ignores the opposite perspective; it is impossible to count the number of occasions that intrusion would have produced negative results. No number of "what if" scenarios can fully analyze the possibilities. Therefore, only the analysis of this specific intrusion is possible. When Nimitz sent his nudge of a question, that message resulted in Halsey ceasing his pursuit against the Northern Force remnants with his fast battleships. As a result, some of the Japanese ships did indeed slip away from Third Fleet's clutches. Nimitz admitted after the battle that if TF 34 proceeded north it could have possibly

caught the *Ise* and *Hyuga* as well as additional ships.⁴⁸ Therefore, even the one remotely centralized action of Nimitz resulted in less effectiveness than the probable "hands-off" outcome.

For naval combat forces, the opportunity and technological capability to control from afar grew dramatically in the early 20th century. With the invention of sea-based radio, proponents of centralized control debated the adherents of the traditional command authorities. During this growing period, actual practice began to depart from theory when it came to directing ships. Yet the argument to maintain independent command was strong. Decisions could not be made with the limited information available in a message, thus circumstances necessitated a commander act with initiative while without detailed orders. Against this debate, the US Navy found itself fully involved in the Pacific War. Thus, after two years of fighting, the doctrine of decentralized command and control remained and was thoroughly tested in late 1944. At the Battle of Leyte Gulf, the US Navy proved not only that this doctrine worked, but that it was critical for timely success. Despite the complexities of operational plan, the number of units, the ill-conceived command structure, the poor decision by Halsey, and the actions by the Japanese, the Americans decisively won. A subordinate's initiative determined the action. Execution combined with unity of effort made centralized control unnecessary. By having a clear understanding of the overall objective and given the latitude to freely operate, the initiative-based system worked. Given that this system worked in the largest naval battle in history, strong consideration should be given to maintaining these principles. Naval doctrine should never depart from empowering a commander at any level from acting independently to further the overall mission.

¹ (Willmott 2005, 278)

² (Willmott 2005, 242)

³ (Palmer 2005, 274-275)

⁴ (Knox 1915)

⁵ (Knox 1915)

⁶ (Howeth 1963, 61-66)

- ⁷ (Howeth 1963, 193-203)
- ⁸ (Knox 1915)
- ⁹ (Pratt 1922)
- ¹⁰ (Howeth 1963, 261-265)
- ¹¹ (Palmer 2005, 258) Quoted from U. S. Navy, *War Instructions* (Washington: Government Printing Office, 1924), forward
- ¹² (Jenkins 1925)
- ¹³ (Palmer 2005, 255)
- ¹⁴ (Palmer 2005, 258) See also <http://www.public.navy.mil/usff/Documents/serial-053.pdf>
- ¹⁵ (E. Potter 1976, 52)
- ¹⁶ (Buell 1987, 173)
- ¹⁷ (E. B. Potter 1985, 128) (Palmer 2005, 253)
- ¹⁸ (Wukovits 2010, 133)
- ¹⁹ (War Instructions United States Navy 1944, 207)
- ²⁰ (War Instructions United States Navy 1944, 213-216)
- ²¹ (Willmott 2005, 266-267) (Cutler 1994, 58)
- ²² (Cutler 1994, 159)
- ²³ (Cutler 1994, 55)
- ²⁴ (Halsey, Jr. 1952)
- ²⁵ (E. B. Potter 1985, 284)
- ²⁶ (Halsey, Jr. 1952)
- ²⁷ (Thomas 2006, 213)
- ²⁸ (Solberg 1995, 75)
- ²⁹ (Solberg 1995, 76)
- ³⁰ (Cutler 1994, 85) The battleships *Ise* and *Hyuga* were actually 1/2 battleship, 1/2 aircraft carrier
- ³¹ (Cutler 1994, 94)
- ³² (Willmott 2005, 102-104)
- ³³ (Hornfischer 2004, Chpt 14)
- ³⁴ (Hornfischer 2004, Chpt 16)
- ³⁵ (Hornfischer 2004, Chpt 22)
- ³⁶ (Hornfischer 2004, Chpt 17)
- ³⁷ (Cutler 1994, 233)
- ³⁸ (Solberg 1995, 136)
- ³⁹ (Solberg 1995, 139)
- ⁴⁰ (Cutler 1994, 278-280, 282)
- ⁴¹ (Hornfischer 2004, Chpt 53)
- ⁴² (AFDD 1 2011, 38)
- ⁴³ (FM 1 2005, 3-33)
- ⁴⁴ (NDP 1 2010, 36)
- ⁴⁵ (Hornfischer 2004, Chpt 30) TU 77.4.3 launched its compliment of aircraft as a single attack
- ⁴⁶ (E. Potter 1976, 337)
- ⁴⁷ (E. Potter 1976, 339)
- ⁴⁸ (Hornfischer 2004, 326)

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